TRC

TRC Environmental Consultants, Inc. 800 Connecticut Blvd., East Hartford, CT 06108 (203) 289-8631

June 19, 1991

Mr. Francisco LaGreca
U.S. Department of the Navy
Naval Facilities Engineering Command
Northern Division
U.S. Naval Base, Building 77-L
Philadelphia, PA 19112

RE: Installation Restoration Program Studies
Soil Pile Sample Results for Melville North Landfill
Naval Education Training Center
Newport, Rhode Island
TRC Project No. 6760-N81

Dear Mr. LaGreca:

TRC Environmental Consultants, Inc. (TRC) presents herewith the findings of the investigation of the "oil-soaked" soil piles at the Melville North Landfill. These findings include both the results of an initial sampling round conducted on April 4, 1990 and a second sampling round conducted on April 30, 1991.

DESCRIPTION OF INVESTIGATIONS

On April 4, 1990, TRC collected 12 soil samples from soil piles located on the northern portion of the landfill site. The soil sample locations were designated as WP-1 through WP-12. The soil samples were collected in a random manner throughout the waste piles to obtain representative samples. The soil samples were tak n using decontaminated, dedicated stainless steel spoons. The samples were shipped, following proper chain-of-custody procedures, to New England Testing Laboratory, Inc. in North Providence, Rhode Island for required analysis. The samples were received at the laboratory on April 5, 1990 in good condition. All samples w re analyzed using Extraction Procedure (EP) Toxicity methods for 8 h avy metals. The samples were also analyzed for volatile organic compounds (VOCs), PCBs, corrosivity, flashpoint and reactivity using USEPA, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846.

On April 30, 1991 TRC collected an additional 5 soil samples from 5 soil pile locations which exhibited positive results during the previous EP toxicity analyses (WP-5 and WP-12), or which had exhibited petroleum product-like odors during th first sampling

round (WP-4, WP-6, and WP-7). These additional samples w re collected for re-analysis using the new Toxicity Characteristic Leaching Procedure (TCLP), due to the change in the federal regulations, which has occurred since the April 4, 1990 sampling round, regarding the required laboratory methods used to characterize hazardous wastes. The five additional samples wer collected as described above and were received at New England Testing Laboratory, Inc. for analysis on May 1, 1991. The TCLP analyses included the same 8 metals as the EP Toxicity procedure, as well as 10 volatile organic compounds (VOCs), 13 semi-volatil bas /neutral and acid extractable compounds (BNAs) and 9 pesticides/herbicides.

ANALYTICAL RESULTS

Complete copies of the laboratory data reports for the April 4, 1990 and April 30, 1991 sampling rounds are presented as Attachments A and B, respectively. The soil sample analytical results are summarized below.

- Concentrations of the eight heavy metals analyzed by the EP Toxicity procedure (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver) were below the analytical detection limits in all but two of the April 4, 1990 samples. The exceptions were samples WP-5 and WP-12, in which cadmium was detected at 0.11 mg/l and 0.02 mg/l, respectively.

- Concentrations of the same metals were all below the analytical detection limits for the 5 samples (including WP-5 and WP-12) analyzed by the TCLP method the following year.

- VOCs were not detected in any of the April 4, 1990 samples, with detection limits ranging from 1 to 20 mg/kg.

- TCLP VOA analyses of the April 30, 1991 samples indicated the presence of benzene in samples WP-5, WP-6, WP-7 and WP-12 at concentrations of 0.144 mg/l, 0.164 mg/l, 0.042 mg/l and 0.046 mg/l, respectively.

- PCBs (as Aroclor 1242) were not detected in any of the April 4, 1990 samples at a detection limit of 0.5 mg/kg. PCBs are not included as analytes in the TCLP method, and therefore were not included in the April 1991 reanalysis.

- BNAs and pesticides/herbicides were not included in the analyte list during the April 1990 sampling round. Concentrations of BNAs and pesticides/herbicides during the April 1991 sampling round wer all below detection limits (analyzed using the TCLP method), with d tection limits

ranging from 0.05 to 0.1 mg/l for BNAs and 0.001 to 0.1 mg/l for pesticides/herbicides.

- Sulfide and cyanide were not detected in any of the April 1990 samples, with detection limits of 1 mg/kg and 0.3 mg/kg, respectively. Sulfide and cyanide are not included as analytes in the TCLP method, and therefore were not included in the April 1991 reanalysis.

- The pH of the April 1990 samples ranged from 3.6 to 6.2, and averaged 4.15.

- Flashpoint was greater than 200°F in all of the April 1990 samples.

HAZARDOUS WASTE DETERMINATION

Contaminated soils would be considered a hazardous waste under the Code of Federal Regulations (40 CFR Part 261) only if th y exhibit the characteristics of hazardous waste identified in Subpart C of these regulations. The hazardous waste characteristics include ignitability, corrosivity, reactivity, and the TCLP toxicity. As noted above, the soil samples collected from the Melville North Landfill were examined for these characteristics, as well as for EP toxicity characteristics, which have since been superseded by the TCLP analyses. The criteria which define these characteristics are compared to the soil sample analytical results below.

Ignitability

A solid waste which is not a liquid is considered to exhibit the characteristic of ignitability if it "is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard." According to the Federal Regulations, the standard for evaluating the ignitability of a waste is the flashpoint. The flashpoint for all of the April 1990 soil sampl s was measured to be greater than 200°F. This value is considerably greater than the lowest allowable liquid flash point limit of 140°F. Based upon this comparison to the referenced regulations, the "oil-soaked" soil does not exhibit characteristics of ignitability.

Corrosivity

The standard for corrosivity is generally based upon the pH of the solid waste. According to the Federal Regulations, th waste is considered corrosive if it has a pH of less than 2 or greater than 12.5. The pH of all of the soil samples collected from the waste piles in April 1990 was between these limits (ranged from 3.6 to 6.2). Based upon this comparison to the referenc d r gulations, the "oil-soaked" soil does not exhibit characteristics of corrosivity.

Reactivity

According to the federal regulations, reactivity is generally determined by whether or not the material is normally unstable, reacts with water, is capable of explosive reaction, or is a cyanide or sulfide bearing waste capable of generating toxic gas s, vapors or fumes. These soils are not expected to contain any unstable, explosive or water reactive materials. Characteristics of reactivity were not observed during collection of the soil samples. Also, the analytical results for total releasable cyanide and sulfide (both below detection limits) indicate that these soils would not be considered a cyanide or sulfide bearing waste. Based upon this comparison to the referenced regulations, the "oil-soaked" soil does not exhibit characteristics of reactivity.

TCLP Toxicity (including former EP Toxicity parameters)

A solid waste exhibits characteristics of TCLP toxicity if the xtract collected from a representative sample by the EPA-approv d leaching procedure contains certain contaminants above concentrations listed in 40 CFR Part 261.24. During the first sampling round (April 1990), while two of the samples exhibited detectable levels of chromium, the levels were less than the maximum allowable EP Toxicity concentrations enforceable at the time (see Table 1). During the second sampling round, none of the TCLP metals, VOCs (including benzene), BNAs and pesticides/ h rbicides analyzed were present in a concentration equal to or exceeding the maximum TCLP concentrations listed in the Federal Regulations, also presented in Table 1. Based upon this comparison to the referenced regulations, the "oil-soaked" soil does not xhibit characteristics of TCLP Toxicity (or characteristics of the former EP Toxicity).

CONCLUSIONS

The laboratory analytical results of the seventeen soil pile samples collected at the Melville North Landfill indicate that th se soils do not exhibit any of the characteristics of a hazardous waste. This conclusion is based upon those properties as presented in the Code of Federal Regulations 40 CFR Part 261. The soil samples also do not contain detectable concentrations of PCBs. Based on these findings, it is clear that the soil pile is not a hazardous waste and can be disposed of in an "industrial-type" landfill normally permitted to accept contaminated material. Standard procedures for loading and off-loading waste soils should be implemented as part of the required procedure. It would also be prudent to maintain detailed records of the volume/weight of soil which is shipped off-site for disposal.

We trust this report provides the information which you need at this time. We are available to discuss this report at your convenience. If you have any questions or require additional information, please do not hesitate to call.

Sincerely,

TRC ENVIRONMENTAL CONSULTANTS, INC.

James Peronto, P.E.
Project Manager

nclosure
jp/lth

cc: Robert Smith, TRC-ECI

TRC

TABLE 1

MAXIMUM TCLP TOXICITY LIMITS

CONTAMINANT	MAXIMUM CONC.(mg/l)
Metals	
Arsenic	5.0
Barium	100.0
Cadmium	1.0
Chromium	5.0
Lead	5.0
M rcury	0.2
S lenium	1.0
Silver	5.0
Volatile Organic Compounds	
Benzene	0.5
Carbon Tetrachloride	0.5
Chlorobenzene	100.0
Chloroform	6.0
1,2-Dichloroethane	0.5
1,1-Dichloroethylene	0.7
Methyl Ethyl Ketone	200.0
Tetrachloroethylene	0.7
Trichloroethylene	0.5
Vinyl Chloride	0.2
Semivolatile Base/Neutral Extractables	
Hexachlorobenzene	0.13
Hexachloro-1,3-butadiene	0.5
Hexachloroethane	3.0
Nitrobenzene	2.0
Pyridine	5.0
2,4-Dinitrotoluene	0.13
1,4-Dichlorobenzene	7.5
Semivolatile Acid Extractabl s	
o-Cresol	200.0
m-Cresol	200.0
p-Cresol	200.0
Pentachlorophenol	100.0
2,4,5-Trichlorophenol	400.0
2,4,6-Trichlorophenol	2.0
Pesticides/Herbicides	
Chlordane	0.03
2,4-D	10.0
Endrin	0.02
Heptachlor	0.008
Heptachlor Epoxide	0.008
Lindane	0.4
Methoxychlor	10.0
Toxaphene	0.5
2,4,5-TP Silvex	1.0

MAXIMUM EP TOXICITY LIMITS

(Superceded by TCLP Procedure and associated limits)

CONTAMINANT	MAXIMUM CONC.(mg/l)
Ars nic	5.0
Barium	100.0
Cadmium	1.0
Chromium	5.0
Lead	5.0
M rcury	0.2
S lenium	1.0
Silver	5.0
Endrin	0.02
Lindane	0.4
Methoxychlor	10.0
Toxaphene	0.5
2,4-D	10.0
2,4,5-TP Silvex	1.0

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ATTACHMENT A

ANALYTICAL RESULTS
APRIL 4, 1990 SAMPLING ROUND

TRC

Chemistry Industrial Hygiene Microbiology Physical Testing

Certificate of Analysis

To TRC Environmental
800 Connecticut Blvd.
Ea. Hartford, CT 06108

Attn: Jim Peronto

Date Reported April 13, 1990

Date Received April 5, 1990

Order No 19651

Case No A0405-02

Sample Description Twelve (12) submitted samples Soil designated:
"Site 02- Melville North Landfill"

1. MN WP1 404
2. MN WP2 404
3. MN WP3 404
4. MN WP4 404
5. MN WP5 404
6. MN WP6 404
7. MN WP7 404
8. MN WP8 404
9. MN WP9 404
10. MN WP10 404
11. MN WP11 404
12. MN WP12 404

SUBJECT: Determine VOC's, E.P. Extractable: 8 heavy metals, Corrosivity, Reactivity, PCB's and Flashpoint.

METHOD: Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, USEPA: EP Toxicity-1310, VOC's-8240, Corrosivity-9045, PCB's-8080, Flashpoint-1010, Reactivity-(7.3.3.2 Cyanide)(7.3.4.2 Sulfide)

RESULTS: See Attached

COMMENT: These samples are contaminated with oil.

Mark H. Bishop
Laboratory Director

NEW ENGLAND TESTING LABORATORY, INC.
1254 Douglas Avenue, North Providence, Rhode Island 02904-5392 • 401-353-3420

Case No.: A0405-02

MN WP1 404

Parameter	Result, mg/L
E.P. Extractable Metals	
Arsenic	<0.005
Barium	<0.1
Cadmium	<0.01
Chromium	<0.02
Lead	<0.05
Mercury	<0.002
Selenium	<0.005
Silver	<0.02

	Result, mg/Kg
Corrosivity	
pH, S.U.	6.2
Reactivity	
Sulfide	<1
Cyanide	<0.3
PCB's	Not Detected[1]
VOC's	See Attached
Flashpoint, Deg. F	>200
Solids, %	82

[1]Detection Limit is 0.5 mg/Kg as Aroclor 1242

Case No.: A0405-02

MN WP2 404

Parameter	Result, mg/L
E.P. Extractable Metals	
Arsenic	<0.005
Barium	<0.1
Cadmium	<0.01
Chromium	<0.02
Lead	<0.05
Mercury	<0.002
Selenium	<0.005
Silver	<0.02

	Result, mg/Kg
Corrosivity	
pH, S.U.	4.6
Reactivity	
Sulfide	<1
Cyanide	<0.3
PCB's	Not Detected[1]
VOC's	See Attached
Flashpoint, Deg. F	>200
Solids, %	93

[1]Detection Limit is 0.5 mg/Kg as Aroclor 1242

Case No.: A0405-02

MN WP3 404

Parameter	Result, mg/L
E.P. Extractable Metals	
Arsenic	<0.005
Barium	<0.1
Cadmium	<0.01
Chromium	<0.02
Lead	<0.05
Mercury	<0.002
Selenium	<0.005
Silver	<0.02

	Result, mg/Kg
Corrosivity	
pH, S.U.	4.0
Reactivity	
Sulfide	<1
Cyanide	<0.3
PCB's	Not Detected[1]
VOC's	See Attached
Flashpoint, Deg. F	>200
Solids, %	96

[1]Detection Limit is 0.5 mg/Kg as Aroclor 1242

Case No.: A0405-02

MN WP4 404

Parameter	Result, mg/L
E.P. Extractable Metals	
Arsenic	<0.005
Barium	<0.1
Cadmium	<0.01
Chromium	<0.02
Lead	<0.05
Mercury	<0.002
Selenium	<0.005
Silver	<0.02

	Result, mg/Kg
Corrosivity	
pH, S.U.	4.0
Reactivity	
Sulfide	<1
Cyanide	<0.3
PCB's	Not Detected[1]
VOC's	See Attached
Flashpoint, Deg. F	>200
Solids, %	98

[1]Detection Limit is 0.5 mg/Kg as Aroclor 1242

Case No.: A0405-02

MN WP5 404

Parameter	Result, mg/L
E.P. Extractable Metals	
Arsenic	<0.005
Barium	<0.1
Cadmium	0.11
Chromium	<0.02
Lead	<0.05
Mercury	<0.002
Selenium	<0.005
Silver	<0.02

	Result, mg/Kg
Corrosivity	
pH, S.U.	4.0
Reactivity	
Sulfide	<1
Cyanide	<0.3
PCB's	Not Detected[1]
VOC's	See Attached
Flashpoint, Deg. F	>200
Solids, %	82

[1]Detection Limit is 0.5 mg/Kg as Aroclor 1242

Case No.: A0405-02

MN WP6 404

Parameter	Result, mg/L
E.P. Extractable Metals	
Arsenic	<0.005
Barium	<0.1
Cadmium	<0.01
Chromium	<0.02
Lead	<0.05
Mercury	<0.002
Selenium	<0.005
Silver	<0.02

	Result, mg/Kg
Corrosivity	
pH, S.U.	4.1
Reactivity	
Sulfide	<1
Cyanide	<0.3
PCB's	Not Detected[1]
VOC's	See Attached
Flashpoint, Deg. F	>200
Solids, %	96

[1]Detection Limit is 0.5 mg/Kg as Aroclor 1242

Case No.: A0405-02

MN WP7 404

Parameter	Result, mg/L
E.P. Extractable Metals	
Arsenic	<0.005
Barium	<0.1
Cadmium	<0.01
Chromium	<0.02
Lead	<0.05
Mercury	<0.002
Selenium	<0.005
Silver	<0.02

	Result, mg/Kg
Corrosivity	
pH, S.U.	3.8
Reactivity	
Sulfide	<1
Cyanide	<0.3
PCB's	Not Detected[1]
VOC's	See Attached
Flashpoint, Deg. F	>200
Solids, %	81

[1]Detection Limit is 0.5 mg/Kg as Aroclor 1242

Case No.: A0405-02

MN WP8 404

Parameter	Result, mg/L
E.P. Extractable Metals	
Arsenic	<0.005
Barium	<0.1
Cadmium	<0.01
Chromium	<0.02
Lead	<0.05
Mercury	<0.002
Selenium	<0.005
Silver	<0.02

	Result, mg/Kg
Corrosivity	
pH, S.U.	3.8
Reactivity	
Sulfide	<1
Cyanide	<0.3
PCB's	Not Detected[1]
VOC's	See Attached
Flashpoint, Deg. F	>200
Solids, %	96

[1]Detection Limit is 0.5 mg/Kg as Aroclor 1242

Case No.: A0405-02

MN WP9 404

Parameter	Result, mg/L
E.P. Extractable Metals	
Arsenic	<0.005
Barium	<0.1
Cadmium	<0.01
Chromium	<0.02
Lead	<0.05
Mercury	<0.002
Selenium	<0.005
Silver	<0.02

	Result, mg/Kg
Corrosivity	
pH, S.U.	3.6
Reactivity	
Sulfide	<1
Cyanide	<0.3
PCB's	Not Detected[1]
VOC's	See Attached
Flashpoint, Deg. F	>200
Solids, %	87

[1]Detection Limit is 0.5 mg/Kg as Aroclor 1242

Case No.: A0405-02

MN WP10 404

Parameter	Result, mg/L
E.P. Extractable Metals	
Arsenic	<0.005
Barium	<0.1
Cadmium	<0.01
Chromium	<0.02
Lead	<0.05
Mercury	<0.002
Selenium	<0.005
Silver	<0.02

	Result, mg/Kg
Corrosivity	
pH, S.U.	3.9
Reactivity	
Sulfide	<1
Cyanide	<0.3
PCB's	Not Detected[1]
VOC's	See Attached
Flashpoint, Deg. F	>200
Solids, %	94

[1]Detection Limit is 0.5 mg/Kg as Aroclor 1242

Case No.: A0405-02

MN WP11 404

Parameter	Result, mg/L
E.P. Extractable Metals	
Arsenic	<0.005
Barium	<0.1
Cadmium	<0.01
Chromium	<0.02
Lead	<0.05
Mercury	<0.002
Selenium	<0.005
Silver	<0.02

	Result, mg/Kg
Corrosivity	
pH, S.U.	3.9
Reactivity	
Sulfide	<1
Cyanide	<0.3
PCB's	Not Detected[1]
VOC's	See Attached
Flashpoint, Deg. F	>200
Solids, %	97

[1]Detection Limit is 0.5 mg/Kg as Aroclor 1242

Case No.: A0405-02

MN WP12 404

Parameter	Result, mg/L
E.P. Extractable Metals	
Arsenic	<0.005
Barium	<0.1
Cadmium	0.02
Chromium	<0.02
Lead	<0.05
Mercury	<0.002
Selenium	<0.005
Silver	<0.02

	Result, mg/Kg
Corrosivity	
pH, S.U.	3.9
Reactivity	
Sulfide	<1
Cyanide	<0.3
PCB's	Not Detected[1]
VOC's	See Attached
Flashpoint, Deg. F	>200
Solids, %	98

[1]Detection Limit is 0.5 mg/Kg as Aroclor 1242

Sample: MN WP1 404 Case No.: A0405-02
Date Analyzed: 4/12/90

Subject: Volatile Organic Compounds EPA 8240

Compound	Concentration mg/Kg (ppm)[1]	Compound	Concentration mg/Kg (ppm)[1]
Benzene	N.D.	1,2-Dichloropropane	N.D.
Carbontetrachloride	N.D.	cis-1,3-Dichloropropene	N.D.
Chlorobenzene	N.D.	trans-1,3-Dichloropropene	N.D.
1,1-Dichloroethane	N.D.	Ethylbenzene	N.D.
1,2-Dichloroethane	N.D.	Methylene chloride	N.D.
1,1,1-Trichloroethane	N.D.	Methyl chloride	N.D.
1,1,2-Trichloroethane	N.D.	Methyl bromide	N.D.
1,1,2,2-Tetrachloroethane	N.D.	Bromoform	N.D.
Chloroethane	N.D.	Bromodichloromethane	N.D.
2-Chloroethyl vinyl ether	N.D.	Dibromochloromethane	N.D.
Chloroform	N.D.	Tetrachloroethylene	N.D.
1,1-Dichloroethylene	N.D.	Toluene	N.D.
1,2-trans-Dichloroethylene	N.D.	Trichloroethylene	N.D.
Acetone[2]	N.D.	Vinyl Chloride	N.D.
2-Butanone[2]	N.D.	Methyl Isobutyl Ketone[2]	N.D.
Carbon Disulfide[2]	N.D.	Styrene	N.D.
2-Hexanone[2]	N.D.	Vinyl Acetate[2]	N.D.
		Total Xylenes	N.D.

[1] Detection limit is 1 mg/Kg. N.D. = not detected.

[2] Detection limit is 20 mg/Kg.

Sample: MN WP2 404 Case No.: A0405-02
Date Analyzed: 4/12/90

Subject: Volatile Organic Compounds EPA 8240

Compound	Concentration mg/Kg (ppm)[1]	Compound	Concentration mg/Kg (ppm)[1]
Benzene	N.D.	1,2-Dichloropropane	N.D.
Carbontetrachloride	N.D.	cis-1,3-Dichloropropene	N.D.
Chlorobenzene	N.D.	trans-1,3-Dichloropropene	N.D.
1,1-Dichloroethane	N.D.	Ethylbenzene	N.D.
1,2-Dichloroethane	N.D.	Methylene chloride	N.D.
1,1,1-Trichloroethane	N.D.	Methyl chloride	N.D.
1,1,2-Trichloroethane	N.D.	Methyl bromide	N.D.
1,1,2,2-Tetrachloroethane	N.D.	Bromoform	N.D.
Chloroethane	N.D.	Bromodichloromethane	N.D.
2-Chloroethyl vinyl ether	N.D.	Dibromochloromethane	N.D.
Chloroform	N.D.	Tetrachloroethylene	N.D.
1,1-Dichloroethylene	N.D.	Toluene	N.D.
1,2-trans-Dichloroethylene	N.D.	Trichloroethylene	N.D.
Acetone[2]	N.D.	Vinyl Chloride	N.D.
2-Butanone[2]	N.D.	Methyl Isobutyl Ketone[2]	N.D.
Carbon Disulfide[2]	N.D.	Styrene	N.D.
2-Hexanone[2]	N.D.	Vinyl Acetate[2]	N.D.
		Total Xylenes	N.D.

[1] Detection limit is 1 mg/Kg. N.D. = not detected.

[2] Detection limit is 20 mg/Kg.

Sample: MN WP3 404
Date Analyzed: 4/12/90

Case No.: A0405-02

Subject: Volatile Organic Compounds EPA 8240

Compound	Concentration mg/Kg (ppm)[1]	Compound	Concentration mg/Kg (ppm)[1]
Benzene	N.D.	1,2-Dichloropropane	N.D.
Carbontetrachloride	N.D.	cis-1,3-Dichloropropene	N.D.
Chlorobenzene	N.D.	trans-1,3-Dichloropropene	N.D.
1,1-Dichloroethane	N.D.	Ethylbenzene	N.D.
1,2-Dichloroethane	N.D.	Methylene chloride	N.D.
1,1,1-Trichloroethane	N.D.	Methyl chloride	N.D.
1,1,2-Trichloroethane	N.D.	Methyl bromide	N.D.
1,1,2,2-Tetrachloroethane	N.D.	Bromoform	N.D.
Chloroethane	N.D.	Bromodichloromethane	N.D.
2-Chloroethyl vinyl ether	N.D.	Dibromochloromethane	N.D.
Chloroform	N.D.	Tetrachloroethylene	N.D.
1,1-Dichloroethylene	N.D.	Toluene	N.D.
1,2-trans-Dichloroethylene	N.D.	Trichloroethylene	N.D.
Acetone[2]	N.D.	Vinyl Chloride	N.D.
2-Butanone[2]	N.D.	Methyl Isobutyl Ketone[2]	N.D.
Carbon Disulfide[2]	N.D.	Styrene	N.D.
2-Hexanone[2]	N.D.	Vinyl Acetate[2]	N.D.
		Total Xylenes	N.D.

[1] Detection limit is 1 mg/Kg. N.D. = not detected.

[2] Detection limit is 20 mg/Kg.

Sample: MN WP4 404 Case No.: A0405-02
Date Analyzed: 4/12/90

Subject: Volatile Organic Compounds EPA 8240

Compound	Concentration mg/Kg (ppm)[1]	Compound	Concentration mg/Kg (ppm)[1]
Benzene	N.D.	1,2-Dichloropropane	N.D.
Carbontetrachloride	N.D.	cis-1,3-Dichloropropene	N.D.
Chlorobenzene	N.D.	trans-1,3-Dichloropropene	N.D.
1,1-Dichloroethane	N.D.	Ethylbenzene	N.D.
1,2-Dichloroethane	N.D.	Methylene chloride	N.D.
1,1,1-Trichloroethane	N.D.	Methyl chloride	N.D.
1,1,2-Trichloroethane	N.D.	Methyl bromide	N.D.
1,1,2,2-Tetrachloroethane	N.D.	Bromoform	N.D.
Chloroethane	N.D.	Bromodichloromethane	N.D.
2-Chloroethyl vinyl ether	N.D.	Dibromochloromethane	N.D.
Chloroform	N.D.	Tetrachloroethylene	N.D.
1,1-Dichloroethylene	N.D.	Toluene	N.D.
1,2-trans-Dichloroethylene	N.D.	Trichloroethylene	N.D.
Acetone[2]	N.D.	Vinyl Chloride	N.D.
2-Butanone[2]	N.D.	Methyl Isobutyl Ketone[2]	N.D.
Carbon Disulfide[2]	N.D.	Styrene	N.D.
2-Hexanone[2]	N.D.	Vinyl Acetate[2]	N.D.
		Total Xylenes	N.D.

[1] Detection limit is 1 mg/Kg. N.D. = not detected.

[2] Detection limit is 20 mg/Kg.

Sample: MN WP5 404 Case No.: A0405-02
Date Analyzed: 4/12/90

Subject: Volatile Organic Compounds EPA 8240

Compound	Concentration mg/Kg (ppm)[1]	Compound	Concentration mg/Kg (ppm)[1]
Benzene	N.D.	1,2-Dichloropropane	N.D.
Carbontetrachloride	N.D.	cis-1,3-Dichloropropene	N.D.
Chlorobenzene	N.D.	trans-1,3-Dichloropropene	N.D.
1,1-Dichloroethane	N.D.	Ethylbenzene	N.D.
1,2-Dichloroethane	N.D.	Methylene chloride	N.D.
1,1,1-Trichloroethane	N.D.	Methyl chloride	N.D.
1,1,2-Trichloroethane	N.D.	Methyl bromide	N.D.
1,1,2,2-Tetrachloroethane	N.D.	Bromoform	N.D.
Chloroethane	N.D.	Bromodichloromethane	N.D.
2-Chloroethyl vinyl ether	N.D.	Dibromochloromethane	N.D.
Chloroform	N.D.	Tetrachloroethylene	N.D.
1,1-Dichloroethylene	N.D.	Toluene	N.D.
1,2-trans-Dichloroethylene	N.D.	Trichloroethylene	N.D.
Acetone[2]	N.D.	Vinyl Chloride	N.D.
2-Butanone[2]	N.D.	Methyl Isobutyl Ketone[2]	N.D.
Carbon Disulfide[2]	N.D.	Styrene	N.D.
2-Hexanone[2]	N.D.	Vinyl Acetate[2]	N.D.
		Total Xylenes	N.D.

[1] Detection limit is 1 mg/Kg. N.D. = not detected.

[2] Detection limit is 20 mg/Kg.

Sample: MN WP6 404 Case No.: A0405-02
Date Analyzed: 4/12/90

Subject: Volatile Organic Compounds EPA 8240

Compound	Concentration mg/Kg (ppm)[1]	Compound	Concentration mg/Kg (ppm)[1]
Benzene	N.D.	1,2-Dichloropropane	N.D.
Carbontetrachloride	N.D.	cis-1,3-Dichloropropene	N.D.
Chlorobenzene	N.D.	trans-1,3-Dichloropropene	N.D.
1,1-Dichloroethane	N.D.	Ethylbenzene	N.D.
1,2-Dichloroethane	N.D.	Methylene chloride	N.D.
1,1,1-Trichloroethane	N.D.	Methyl chloride	N.D.
1,1,2-Trichloroethane	N.D.	Methyl bromide	N.D.
1,1,2,2-Tetrachloroethane	N.D.	Bromoform	N.D.
Chloroethane	N.D.	Bromodichloromethane	N.D.
2-Chloroethyl vinyl ether	N.D.	Dibromochloromethane	N.D.
Chloroform	N.D.	Tetrachloroethylene	N.D.
1,1-Dichloroethylene	N.D.	Toluene	N.D.
1,2-trans-Dichloroethylene	N.D.	Trichloroethylene	N.D.
Acetone[2]	N.D.	Vinyl Chloride	N.D.
2-Butanone[2]	N.D.	Methyl Isobutyl Ketone[2]	N.D.
Carbon Disulfide[2]	N.D.	Styrene	N.D.
2-Hexanone[2]	N.D.	Vinyl Acetate[2]	N.D.
		Total Xylenes	N.D.

[1] Detection limit is 1 mg/Kg. N.D. = not detected.

[2] Detection limit is 20 mg/Kg.

Sample: MN WP7 404 Case No.: A0405-02
Date Analyzed: 4/12/90

Subj ct: Volatile Organic Compounds EPA 8240

Compound	Concentration mg/Kg (ppm)[1]	Compound	Concentration mg/Kg (ppm)[1]
Benzene	N.D.	1,2-Dichloropropane	N.D.
Carbontetrachloride	N.D.	cis-1,3-Dichloropropene	N.D.
Chlorobenzene	N.D.	trans-1,3-Dichloropropene	N.D.
1,1-Dichloroethane	N.D.	Ethylbenzene	N.D.
1,2-Dichloroethane	N.D.	Methylene chloride	N.D.
1,1,1-Trichloroethane	N.D.	Methyl chloride	N.D.
1,1,2-Trichloroethane	N.D.	Methyl bromide	N.D.
1,1,2,2-Tetrachloroethane	N.D.	Bromoform	N.D.
Chloroethane	N.D.	Bromodichloromethane	N.D.
2-Chloroethyl vinyl ether	N.D.	Dibromochloromethane	N.D.
Chloroform	N.D.	Tetrachloroethylene	N.D.
1,1-Dichloroethylene	N.D.	Toluene	N.D.
1,2-trans-Dichloroethylene	N.D.	Trichloroethylene	N.D.
Acetone[2]	N.D.	Vinyl Chloride	N.D.
2-Butanone[2]	N.D.	Methyl Isobutyl Ketone[2]	N.D.
Carbon Disulfide[2]	N.D.	Styrene	N.D.
2-Hexanone[2]	N.D.	Vinyl Acetate[2]	N.D.
		Total Xylenes	N.D.

[1] Detection limit is 1 mg/Kg. N.D. = not detected.

[2] Detection limit is 20 mg/Kg.

Sample: MN WP8 404 Case No.: A0405-02
Date Analyzed: 4/12/90

Subject: Volatile Organic Compounds EPA 8240

Compound	Concentration mg/Kg (ppm)[1]	Compound	Concentration mg/Kg (ppm)[1]
Benz ne	N.D.	1,2-Dichloropropane	N.D.
Carbontetrachloride	N.D.	cis-1,3-Dichloropropene	N.D.
Chlorobenzene	N.D.	trans-1,3-Dichloropropene	N.D.
1,1-Dichloroethane	N.D.	Ethylbenzene	N.D.
1,2-Dichloroethane	N.D.	Methylene chloride	N.D.
1,1,1-Trichloroethane	N.D.	Methyl chloride	N.D.
1,1,2-Trichloroethane	N.D.	Methyl bromide	N.D.
1,1,2,2-Tetrachloroethane	N.D.	Bromoform	N.D.
Chloroethane	N.D.	Bromodichloromethane	N.D.
2-Chloroethyl vinyl ether	N.D.	Dibromochloromethane	N.D.
Chloroform	N.D.	Tetrachloroethylene	N.D.
1,1-Dichloroethylene	N.D.	Toluene	N.D.
1,2-trans-Dichloroethylene	N.D.	Trichloroethylene	N.D.
Acetone[2]	N.D.	Vinyl Chloride	N.D.
2-Butanone[2]	N.D.	Methyl Isobutyl Ketone[2]	N.D.
Carbon Disulfide[2]	N.D.	Styrene	N.D.
2-Hexanone[2]	N.D.	Vinyl Acetate[2]	N.D.
		Total Xylenes	N.D.

[1] Detection limit is 1 mg/Kg. N.D. = not detected.

[2] Detection limit is 20 mg/Kg.

Sample: MN WP9 404 Case No.: A0405-02
Date Analyzed: 4/12/90

Subject: Volatile Organic Compounds EPA 8240

Compound	Concentration mg/Kg (ppm)[1]	Compound	Concentration mg/Kg (ppm)[1]
B nzene	N.D.	1,2-Dichloropropane	N.D.
Carbontetrachloride	N.D.	cis-1,3-Dichloropropene	N.D.
Chlorobenzene	N.D.	trans-1,3-Dichloropropene	N.D.
1,1-Dichloroethane	N.D.	Ethylbenzene	N.D.
1,2-Dichloroethane	N.D.	Methylene chloride	N.D.
1,1,1-Trichloroethane	N.D.	Methyl chloride	N.D.
1,1,2-Trichloroethane	N.D.	Methyl bromide	N.D.
1,1,2,2-Tetrachloroethane	N.D.	Bromoform	N.D.
Chloroethane	N.D.	Bromodichloromethane	N.D.
2-Chloroethyl vinyl ether	N.D.	Dibromochloromethane	N.D.
Chloroform	N.D.	Tetrachloroethylene	N.D.
1,1-Dichloroethylene	N.D.	Toluene	N.D.
1,2-trans-Dichloroethylene	N.D.	Trichloroethylene	N.D.
Acetone[2]	N.D.	Vinyl Chloride	N.D.
2-Butanone[2]	N.D.	Methyl Isobutyl Ketone[2]	N.D.
Carbon Disulfide[2]	N.D.	Styrene	N.D.
2-Hexanone[2]	N.D.	Vinyl Acetate[2]	N.D.
		Total Xylenes	N.D.

[1] Detection limit is 1 mg/Kg. N.D. = not detected.

[2] Detection limit is 20 mg/Kg.

Sample: MN WP10 404 Case No.: A0405-02
Date Analyzed: 4/12/90

Subject: Volatile Organic Compounds EPA 8240

Compound	Concentration mg/Kg (ppm)[1]	Compound	Concentration mg/Kg (ppm)[1]
Benzene	N.D.	1,2-Dichloropropane	N.D.
Carbontetrachloride	N.D.	cis-1,3-Dichloropropene	N.D.
Chlorobenzene	N.D.	trans-1,3-Dichloropropene	N.D.
1,1-Dichloroethane	N.D.	Ethylbenzene	N.D.
1,2-Dichloroethane	N.D.	Methylene chloride	N.D.
1,1,1-Trichloroethane	N.D.	Methyl chloride	N.D.
1,1,2-Trichloroethane	N.D.	Methyl bromide	N.D.
1,1,2,2-Tetrachloroethane	N.D.	Bromoform	N.D.
Chloroethane	N.D.	Bromodichloromethane	N.D.
2-Chloroethyl vinyl ether	N.D.	Dibromochloromethane	N.D.
Chloroform	N.D.	Tetrachloroethylene	N.D.
1,1-Dichloroethylene	N.D.	Toluene	N.D.
1,2-trans-Dichloroethylene	N.D.	Trichloroethylene	N.D.
Acetone[2]	N.D.	Vinyl Chloride	N.D.
2-Butanone[2]	N.D.	Methyl Isobutyl Ketone[2]	N.D.
Carbon Disulfide[2]	N.D.	Styrene	N.D.
2-Hexanone[2]	N.D.	Vinyl Acetate[2]	N.D.
		Total Xylenes	N.D.

[1] Detection limit is 1 mg/Kg. N.D. = not detected.

[2] Detection limit is 20 mg/Kg.

Sample: MN WP11 404 Case No.: A0405-02
Date Analyzed: 4/12/90

Subject: Volatile Organic Compounds EPA 8240

Compound	Concentration mg/Kg (ppm)[1]	Compound	Concentration mg/Kg (ppm)[1]
Benzene	N.D.	1,2-Dichloropropane	N.D.
Carbontetrachloride	N.D.	cis-1,3-Dichloropropene	N.D.
Chlorobenzene	N.D.	trans-1,3-Dichloropropene	N.D.
1,1-Dichloroethane	N.D.	Ethylbenzene	N.D.
1,2-Dichloroethane	N.D.	Methylene chloride	N.D.
1,1,1-Trichloroethane	N.D.	Methyl chloride	N.D.
1,1,2-Trichloroethane	N.D.	Methyl bromide	N.D.
1,1,2,2-Tetrachloroethane	N.D.	Bromoform	N.D.
Chloroethane	N.D.	Bromodichloromethane	N.D.
2-Chloroethyl vinyl ether	N.D.	Dibromochloromethane	N.D.
Chloroform	N.D.	Tetrachloroethylene	N.D.
1,1-Dichloroethylene	N.D.	Toluene	N.D.
1,2-trans-Dichloroethylene	N.D.	Trichloroethylene	N.D.
Acetone[2]	N.D.	Vinyl Chloride	N.D.
2-Butanone[2]	N.D.	Methyl Isobutyl Ketone[2]	N.D.
Carbon Disulfide[2]	N.D.	Styrene	N.D.
2-Hexanone[2]	N.D.	Vinyl Acetate[2]	N.D.
		Total Xylenes	N.D.

[1] Detection limit is 1 mg/Kg. N.D. = not detected.

[2] Detection limit is 20 mg/Kg.

Sample: MN WP12 404 Case No.: A0405-02
Date Analyzed: 4/12/90

Subject: Volatile Organic Compounds EPA 8240

Compound	Concentration mg/Kg (ppm)[1]	Compound	Concentration mg/Kg (ppm)[1]
Benzene	N.D.	1,2-Dichloropropane	N.D.
Carbontetrachloride	N.D.	cis-1,3-Dichloropropene	N.D.
Chlorobenzene	N.D.	trans-1,3-Dichloropropene	N.D.
1,1-Dichloroethane	N.D.	Ethylbenzene	N.D.
1,2-Dichloroethane	N.D.	Methylene chloride	N.D.
1,1,1-Trichloroethane	N.D.	Methyl chloride	N.D.
1,1,2-Trichloroethane	N.D.	Methyl bromide	N.D.
1,1,2,2-Tetrachloroethane	N.D.	Bromoform	N.D.
Chloroethane	N.D.	Bromodichloromethane	N.D.
2-Chloroethyl vinyl ether	N.D.	Dibromochloromethane	N.D.
Chloroform	N.D.	Tetrachloroethylene	N.D.
1,1-Dichloroethylene	N.D.	Toluene	N.D.
1,2-trans-Dichloroethylene	N.D.	Trichloroethylene	N.D.
Acetone[2]	N.D.	Vinyl Chloride	N.D.
2-Butanone[2]	N.D.	Methyl Isobutyl Ketone[2]	N.D.
Carbon Disulfide[2]	N.D.	Styrene	N.D.
2-Hexanone[2]	N.D.	Vinyl Acetate[2]	N.D.
		Total Xylenes	N.D.

[1] Detection limit is 1 mg/Kg. N.D. = not detected.

[2] Detection limit is 20 mg/Kg.

NEW ENGLAND TESTING LABORATORY, INC.
1254 Douglas Avenue
North Providence, RI 02904

CHAIN OF CUSTODY RECORD

PROJ NO: G7G0-NEW
PROJECT NAME: SITE 02 - MELVILLE NORTH LANDFILL
CLIENT: US NAVY / TRC ENVIRONMENTAL CONSULTANTS

SAMPLE NO	DATE	TIME	COMP	GRAB	STATION LOCATION	NO OF CONTAINERS	TESTS: VOAs (8240)	CLP TCL Metals (ICP)	REMARKS
	4/4/90	1500		X	MN WP1 404	3	2	1	
		1505		X	MN WP2 404	3	2	1	
		1507		X	MN WP3 404	3	2	1	
		1508		X	MN WP4 404	3	2	1	
		1510		X	MN WP5 404	3	2	1	
		1512		X	MN WP6 404	3	2	1	
		1515		X	MN WP7 404	3	2	1	
		1520		X	MN WP8 404	3	2	1	
		1525		X	MN WP9 404	3	2	1	
		1530		X	MN WP10 404	3	2	1	
		1535		X	MN WP11 404	3	2	1	
	4/4/90	1540		X	MN WP12 404	3	2	1	
gp gp									

Relinquished by (Signature)	Date/Time	Received by (Signature)	Relinquished by (Signature)	Date/Time	Received by (Signature)
[signature]	4/4/90	FEDERAL EXPRESS			
Relinquished by (Signature)	Date/Time	Received by (Signature)	Relinquished by (Signature)	Date/Time	Received by (Signature)
Relinquished by (Signature)	Date/Time	Received for Laboratory by (Signature)	Date/Time	Remarks	
		Debbie Nowlan	4/5/90 9:00		

ATTACHMENT B

ANALYTICAL RESULTS
APRIL 30, 1991 SAMPLING ROUND

TRC

Certificate of Analysis

To: TRC Environmental
800 Connecticut Blvd.
Ea. Hartford, CT 06108

Attn: Jim Peronto

Date Reported: May 31, 1991

Date Received: May 1, 1991

Order No.

Case No. B0501-03

Sample Description: Five (5) submitted samples Soil designated: "NETC-Melville North"

1. MN-WP4-430
2. MN-WP5-430
3. MN-WP6-430
4. MN-WP7-430
5. MN-WP12-430

SUBJECT: Determine TCLP Extractable: 8 Heavy Metals, VOC's, Semivolatiles, Pesticides and Herbicides

METHOD: Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, USEPA.

RESULTS: See Attached

Mark H. Bishop
Laboratory Director

NEW ENGLAND TESTING LABORATORY, INC.
1254 Douglas Avenue, North Providence, Rhode Island 02904-5392 • 401-353-3420

Sampl : MN-WP4-430 Case No. B0501-03

Dat TCLP Extracted: 5/2/91
Dat Analyzed*: 5/10/91

TCLP Extractable Metals:	Result, mg/L	Regulatory Limit, mg/L
Arsenic	<0.1	5.0
Barium	<1.0	100.0
Cadmium	<0.05	1.0
Chromium	<0.05	5.0
Lead	<0.2	5.0
Mercury	<0.005	0.2
Selenium	<0.1	1.0
Silver	<0.05	5.0

* Dat Completed

Sampl : MN-WP4-430 Case No. B0501-03

Dat TCLP Extracted: 5/2/91
Dat Analyzed: 5/15/91

TCLP Volatile Organic Compounds:

Compound	Concentration mg/L (ppm)	Regulatory Limit, mg/L (ppm)
Benzene	<0.02	0.5
Carbon Tetrachloride	<0.02	0.5
Chlorobenzene	<0.02	100.0
Chloroform	<0.02	6.0
1,2-Dichloroethane	<0.02	0.5
1,1-Dichloroethylene	<0.02	0.7
Methyl Ethyl Ketone (MEK)	<0.5	200.0
Tetrachloroethylene	<0.02	0.7
Trichloroethylene	<0.02	0.5
Vinyl Chloride	<0.04	0.2

Surrogates:	% Recovery	Limits
Toluene d8	101	88-110
1,2-Dichloroethane-d4	93	76-114
4-Bromofluorobenzene	90	86-115

Sample: MN-WP4-430 **Case No.** B0501-03

Dat TCLP Extracted: 5/2/91
Dat Prep Extracted: 5/9/91
Dat Analyzed: 5/13/91

TCLP Semivolatile Base/Neutral Extractable Compounds:

Compound	Concentration mg/L (ppm)	Regulatory Limit, mg/L (ppm)
Hexachlorobenzene	<0.05	0.13
Hexachloro-1,3-butadiene	<0.05	0.5
Hexachloroethane	<0.05	3.0
Nitrobenzene	<0.05	2.0
Pyridine	<0.05	5.0
2,4-Dinitrotoluene	<0.05	0.13
1,4-Dichlorobenzene	<0.05	7.5

TCLP Semivolatile Acid Extractable Compounds:

Compound	Concentration mg/L (ppm)	Regulatory Limit, mg/L (ppm)
o-Cresol	<0.1	200.0
m-Cresol	<0.1	200.0
p-Cresol	<0.1	200.0
Pentachlorophenol	<0.1	100.0
2,4,5-Trichlorophenol	<0.1	400.0
2,4,6-Trichlorophenol	<0.1	2.0

Surrogates:	% Recovery	Limits
Nitrobenzene d5	64	35-114
2-Fluorobiphenyl	63	43-116
p-Terphenyl d14	132	33-141
Phenol d6	29	10-94
2-Fluorophenol	34	21-100
2,4,6-Tribromophenol	29	10-123

Sample: MN-WP4-430 **Case No.** B0501-03

Date TCLP Extracted: 5/2/91
Dat Prep Extracted: 5/9/91
Dat Analyzed: Pest-5/24/91, Herb-5/29/91

TCLP Extractable Pesticides/Herbicides:

Compound	Concentration mg/L (ppm)	Regulatory Limit, mg/L (ppm)
Chlordane	<0.01	0.03
2,4-D	<0.1	10.0
Endrin	<0.001	0.02
Heptachlor	<0.001	0.008
Heptachlor Epoxide	<0.001	0.008
Lindane	<0.001	0.4
Methoxychlor	<0.005	10.0
Toxaphene	<0.01	0.5
2,4,5-TP Silvex	<0.05	1.0

Sample: MN-WP5-430 **Case No.** B0501-03

Dat TCLP Extracted: 5/2/91
Date Analyzed*: 5/10/91

TCLP Extractable Metals:	Result, mg/L	Regulatory Limit, mg/L
Arsenic	<0.1	5.0
Barium	<1.0	100.0
Cadmium	<0.05	1.0
Chromium	<0.05	5.0
Lead	<0.2	5.0
Mercury	<0.005	0.2
Selenium	<0.1	1.0
Silver	<0.05	5.0

Date Completed

Sampl : MN-WP5-430 Case No. B0501-03

Dat TCLP Extracted: 5/2/91
Dat Analyzed: 5/15/91

TCLP Volatile Organic Compounds:

Compound	Concentration mg/L (ppm)	Regulatory Limit, mg/L (ppm)
Benz ne	0.144	0.5
Carbon Tetrachloride	<0.02	0.5
Chlorobenzene	<0.02	100.0
Chloroform	<0.02	6.0
1,2-Dichloroethane	<0.02	0.5
1,1-Dichloroethylene	<0.02	0.7
Methyl Ethyl Ketone (MEK)	<0.5	200.0
Tetrachloroethylene	<0.02	0.7
Trichloroethylene	<0.02	0.5
Vinyl Chloride	<0.04	0.2

Surrogates:	% Recovery	Limits
Toluene d8	100	88-110
1,2-Dichloroethane-d4	95	76-114
4-Bromofluorobenzene	90	86-115

Sampl : MN-WP5-430 Case No. B0501-03

Dat TCLP Extracted: 5/2/91
Dat Prep Extracted: 5/9/91
Date Analyzed: 5/13/91

TCLP Semivolatile Base/Neutral Extractable Compounds:

Compound	Concentration mg/L (ppm)	Regulatory Limit, mg/L (ppm)
Hexachlorobenzene	<0.05	0.13
Hexachloro-1,3-butadiene	<0.05	0.5
Hexachloroethane	<0.05	3.0
Nitrobenzene	<0.05	2.0
Pyridine	<0.05	5.0
2,4-Dinitrotoluene	<0.05	0.13
1,4-Dichlorobenzene	<0.05	7.5

TCLP Semivolatile Acid Extractable Compounds:

Compound	Concentration mg/L (ppm)	Regulatory Limit, mg/L (ppm)
o-Cresol	<0.1	200.0
m-Cr sol	<0.1	200.0
p-Cresol	<0.1	200.0
Pentachlorophenol	<0.1	100.0
2,4,5-Trichlorophenol	<0.1	400.0
2,4,6-Trichlorophenol	<0.1	2.0

Surrogates:	% Recovery	Limits
Nitrobenzene d5	67	35-114
2-Fluorobiphenyl	72	43-116
p-Terphenyl d14	135	33-141
Phenol d6	36	10-94
2-Fluorophenol	39	21-100
2,4,6-Tribromophenol	30	10-123

Sampl : MN-WP5-430 Case No. B0501-03

Dat TCLP Extracted: 5/2/91
Dat Prep Extracted: 5/9/91
Dat Analyzed: Pest-5/24/91, Herb-5/29/91

TCLP Extractable Pesticides/Herbicides:

Compound	Concentration mg/L (ppm)	Regulatory Limit, mg/L (ppm)
Chlordane	<0.01	0.03
2,4-D	<0.1	10.0
Endrin	<0.001	0.02
Heptachlor	<0.001	0.008
Heptachlor Epoxide	<0.001	0.008
Lindane	<0.001	0.4
Methoxychlor	<0.005	10.0
Toxaphene	<0.01	0.5
2,4,5-TP Silvex	<0.05	1.0

Sampl : MN-WP6-430 Case No. B0501-03

Dat TCLP Extracted: 5/2/91
Dat Analyzed*: 5/10/91

TCLP Extractable Metals:	Result, mg/L	Regulatory Limit, mg/L
Arsenic	<0.1	5.0
Barium	<1.0	100.0
Cadmium	<0.05	1.0
Chromium	<0.05	5.0
Lead	<0.2	5.0
Mercury	<0.005	0.2
Selenium	<0.1	1.0
Silver	<0.05	5.0

* Date Completed

Sampl : MN-WP6-430 Case No. B0501-03

Date TCLP Extracted: 5/2/91
Date Analyzed: 5/15/91

TCLP Volatile Organic Compounds:

Compound	Concentration mg/L (ppm)	Regulatory Limit, mg/L (ppm)
Benzene	0.164	0.5
Carbon Tetrachloride	<0.02	0.5
Chlorobenzene	<0.02	100.0
Chloroform	<0.02	6.0
1,2-Dichloroethane	<0.02	0.5
1,1-Dichloroethylene	<0.02	0.7
Methyl Ethyl Ketone (MEK)	<0.5	200.0
Tetrachloroethylene	<0.02	0.7
Trichloroethylene	<0.02	0.5
Vinyl Chloride	<0.04	0.2

Surrogates:	% Recovery	Limits
Tolu ne d8	102	88-110
1,2-Dichloroethane-d4	95	76-114
4-Bromofluorobenzene	93	86-115

Sampl : MN-WP6-430 Case No. B0501-03

Dat TCLP Extracted: 5/2/91
Dat Prep Extracted: 5/9/91
Dat Analyzed: 5/13/91

TCLP Semivolatile Base/Neutral Extractable Compounds:

Compound	Concentration mg/L (ppm)	Regulatory Limit, mg/L (ppm)
Hexachlorobenzene	<0.05	0.13
Hexachloro-1,3-butadiene	<0.05	0.5
Hexachloroethane	<0.05	3.0
Nitrobenzene	<0.05	2.0
Pyridine	<0.05	5.0
2,4-Dinitrotoluene	<0.05	0.13
1,4-Dichlorobenzene	<0.05	7.5

TCLP Semivolatile Acid Extractable Compounds:

Compound	Concentration mg/L (ppm)	Regulatory Limit, mg/L (ppm)
o-Cr sol	<0.1	200.0
m-Cresol	<0.1	200.0
p-Cresol	<0.1	200.0
Pentachlorophenol	<0.1	100.0
2,4,5-Trichlorophenol	<0.1	400.0
2,4,6-Trichlorophenol	<0.1	2.0

Surrogates:	% Recovery	Limits
Nitrobenzene d5	58	35-114
2-Fluorobiphenyl	62	43-116
p-Terphenyl d14	111	33-141
Ph nol d6	33	10-94
2-Fluorophenol	41	21-100
2,4,6-Tribromophenol	36	10-123

Sample: MN-WP6-430 **Case No.** B0501-03

Date TCLP Extracted: 5/2/91
Dat Prep Extracted: 5/9/91
Date Analyzed: Pest-5/24/91, Herb-5/29/91

TCLP Extractable Pesticides/Herbicides:

Compound	Concentration mg/L (ppm)	Regulatory Limit, mg/L (ppm)
Chlordane	<0.01	0.03
2,4-D	<0.1	10.0
Endrin	<0.001	0.02
Heptachlor	<0.001	0.008
Heptachlor Epoxide	<0.001	0.008
Lindane	<0.001	0.4
Methoxychlor	<0.005	10.0
Toxaphene	<0.01	0.5
2,4,5-TP Silvex	<0.05	1.0

Sampl : MN-WP7-430 Case No. B0501-03

Dat TCLP Extracted: 5/2/91
Dat Analyzed*: 5/10/91

TCLP Extractable Metals:	Result, mg/L	Regulatory Limit, mg/L
Arsenic	<0.1	5.0
Barium	<1.0	100.0
Cadmium	<0.05	1.0
Chromium	<0.05	5.0
Lead	<0.2	5.0
Mercury	<0.005	0.2
Selenium	<0.1	1.0
Silver	<0.05	5.0

Date Completed

Sampl : MN-WP7-430 Case No. B0501-03

Dat TCLP Extracted: 5/2/91
Dat Analyzed: 5/15/91

TCLP Volatile Organic Compounds:

Compound	Concentration mg/L (ppm)	Regulatory Limit, mg/L (ppm)
B nz ne	0.042	0.5
Carbon Tetrachloride	<0.02	0.5
Chlorobenzene	<0.02	100.0
Chloroform	<0.02	6.0
1,2-Dichloroethane	<0.02	0.5
1,1-Dichloroethylene	<0.02	0.7
Methyl Ethyl Ketone (MEK)	<0.5	200.0
Tetrachloroethylene	<0.02	0.7
Trichloroethylene	<0.02	0.5
Vinyl Chloride	<0.04	0.2

Surrogates:	% Recovery	Limits
Toluene d8	97	88-110
1,2-Dichloroethane-d4	96	76-114
4-Bromofluorobenzene	90	86-115

Sampl : MN-WP7-430 Case No. B0501-03

Dat TCLP Extracted: 5/2/91
Dat Prep Extracted: 5/9/91
Dat Analyzed: 5/13/91

TCLP Semivolatile Base/Neutral Extractable Compounds:

Compound	Concentration mg/L (ppm)	Regulatory Limit, mg/L (ppm)
Hexachlorobenzene	<0.05	0.13
Hexachloro-1,3-butadiene	<0.05	0.5
Hexachloroethane	<0.05	3.0
Nitrobenzene	<0.05	2.0
Pyridine	<0.05	5.0
2,4-Dinitrotoluene	<0.05	0.13
1,4-Dichlorobenzene	<0.05	7.5

TCLP Semivolatile Acid Extractable Compounds:

Compound	Concentration mg/L (ppm)	Regulatory Limit, mg/L (ppm)
o-Cresol	<0.1	200.0
m-Cresol	<0.1	200.0
p-Cresol	<0.1	200.0
Pentachlorophenol	<0.1	100.0
2,4,5-Trichlorophenol	<0.1	400.0
2,4,6-Trichlorophenol	<0.1	2.0

Surrogates:	% Recovery	Limits
Nitrobenzene d5	66	35-114
2-Fluorobiphenyl	67	43-116
p-Terphenyl d14	116	33-141
Phenol d6	39	10-94
2-Fluorophenol	46	21-100
2,4,6-Tribromophenol	49	10-123

Sample: MN-WP7-430 **Case No. B0501-03**

Date TCLP Extracted: 5/2/91
Dat Prep Extracted: 5/9/91
Dat Analyzed: Pest-5/24/91, Herb-5/29/91

TCLP Extractable Pesticides/Herbicides:

Compound	Concentration mg/L (ppm)	Regulatory Limit, mg/L (ppm)
Chlordane	<0.01	0.03
2,4-D	<0.1	10.0
Endrin	<0.001	0.02
Heptachlor	<0.001	0.008
Heptachlor Epoxide	<0.001	0.008
Lindane	<0.001	0.4
Methoxychlor	<0.005	10.0
Toxaphene	<0.01	0.5
2,4,5-TP Silvex	<0.05	1.0

Sample: MN-WP12-430 **Case No.** B0501-03

Date TCLP Extracted: 5/2/91
Dat Analyzed*: 5/10/91

TCLP Extractable Metals:	Result, mg/L	Regulatory Limit, mg/L
Arsenic	<0.1	5.0
Barium	<1.0	100.0
Cadmium	<0.05	1.0
Chromium	<0.05	5.0
Lead	<0.2	5.0
Mercury	<0.005	0.2
Selenium	<0.1	1.0
Silver	<0.05	5.0

* Date Completed

Sampl : MN-WP12-430 Case No. B0501-03

Date TCLP Extracted: 5/2/91
Date Analyzed: 5/15/91

TCLP Volatile Organic Compounds:

Compound	Concentration mg/L (ppm)	Regulatory Limit, mg/L (ppm)
Benz ne	0.046	0.5
Carbon Tetrachloride	<0.02	0.5
Chlorobenzene	<0.02	100.0
Chloroform	<0.02	6.0
1,2-Dichloroethane	<0.02	0.5
1,1-Dichloroethylene	<0.02	0.7
Methyl Ethyl Ketone (MEK)	<0.5	200.0
Tetrachloroethylene	<0.02	0.7
Trichloroethylene	<0.02	0.5
Vinyl Chloride	<0.04	0.2

Surrogates:	% Recovery	Limits
Toluene d8	100	88-110
1,2-Dichloroethane-d4	97	76-114
4-Bromofluorobenzene	92	86-115

Sampl : MN-WP12-430 Case No. B0501-03

Date TCLP Extracted: 5/2/91
Dat Prep Extracted: 5/9/91
Dat Analyzed: 5/13/91

TCLP Semivolatile Base/Neutral Extractable Compounds:

Compound	Concentration mg/L (ppm)	Regulatory Limit, mg/L (ppm)
Hexachlorobenzene	<0.05	0.13
Hexachloro-1,3-butadiene	<0.05	0.5
Hexachloroethane	<0.05	3.0
Nitrobenzene	<0.05	2.0
Pyridine	<0.05	5.0
2,4-Dinitrotoluene	<0.05	0.13
1,4-Dichlorobenzene	<0.05	7.5

TCLP Semivolatile Acid Extractable Compounds:

Compound	Concentration mg/L (ppm)	Regulatory Limit, mg/L (ppm)
o-Cresol	<0.1	200.0
m-Cresol	<0.1	200.0
p-Cresol	<0.1	200.0
Pentachlorophenol	<0.1	100.0
2,4,5-Trichlorophenol	<0.1	400.0
2,4,6-Trichlorophenol	<0.1	2.0

Surrogates:	% Recovery	Limits
Nitrobenzene d5	67	35-114
2-Fluorobiphenyl	68	43-116
p-Terphenyl d14	114	33-141
Ph nol d6	34	10-94
2-Fluorophenol	37	21-100
2,4,6-Tribromophenol	37	10-123

Sampl : MN-WP12-430 Case No. B0501-03

Date TCLP Extracted: 5/2/91
Dat Prep Extracted: 5/9/91
Dat Analyzed: Pest-5/24/91, Herb-5/29/91

TCLP Extractable Pesticides/Herbicides:

Compound	Concentration mg/L (ppm)	Regulatory Limit, mg/L (ppm)
Chlordane	<0.01	0.03
2,4-D	<0.1	10.0
Endrin	<0.001	0.02
Heptachlor	<0.001	0.008
Heptachlor Epoxide	<0.001	0.008
Lindane	<0.001	0.4
Methoxychlor	<0.005	10.0
Toxaphene	<0.01	0.5
2,4,5-TP Silvex	<0.05	1.0

Case Number: B0501-03

Matrix Spike Analysis

Matrix: W/O 1 B0426-01

METALS

	Spike, mg/l	Result, mg/l	Recovery, %
Arsenic	0.205	0.247	120
Barium	2.23	2.16	97
Cadmium	2.00	1.98	99
Chromium	1.90	1.93	102
Lead	2.03	2.34	101
Mercury	0.0052	0.0054	104
Selenium	0.253	0.263	104
Silver	1.98	1.94	98

VOLATILE ORGANIC COMPOUNDS

	Spike, mg/l	Result, mg/l	Recovery, %
1,1-Dichloroethene	0.2	0.144	72
Trichloroethene	0.2	0.179	90
Benzene	0.2	0.179	90
Chlorobenzene	0.2	0.167	84
Carbon Tetrachloride	0.2	0.156	78
Chloroform	0.2	0.220	110
1,2-Dichloroethane	0.2	0.175	88
M thyl Ethyl Ketone	0.4	0.213	53
Tetrachloroethylene	0.2	0.161	81
Vinyl Chloride	0.4	0.276	69

Cas Number: B0501-03

Matrix Spike Analysis

Matrix: W/O 1 B0426-01

SEMIVOLATILE ORGANIC COMPOUNDS

	Spike, mg/l	Result, mg/l	Recovery, %
Hexachlorobenzene	0.1	0.084	84
H xachloro-1,3-butadiene	0.1	0.056	56
Hexachloroethane	0.1	0.025	25
Nitrobenzene	0.1	0.072	72
Pyridine	0.2	0.112	56
2,4-Dinitrotoluene	0.2	0.088	44
1,4-Dichlorobenzene	0.1	0.056	56
o-Cresol	0.2	0.124	62
m-Cr sol	0.2	0.128	64
p-Cresol	0.2	0.128	64
Pentachlorophenol	0.2	0.085	43
2,4,5-Trichlorophenol	0.2	0.196	98
2,4,6-Trichlorophenol	0.2	0.136	68

Case No.: B0501-03

Matrix Spike Analysis

Matrix: W/O 1 B0426-01

PESTICIDES/HERBICIDES

	Spike, ppb	Result, ppb	Recov ry, %
Lindane	0.125	0.097	78
Endrin	0.251	0.169	67
Heptachlor	0.125	0.095	76
Methyoxchlor	1.25	0.748	60
2,4-D	5.0	2.8	56
2,4,5-TP Silvex	1.0	0.50	50

TRC Environmental Consultants, Inc (203) 289-8631

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME
6760-N81	NETC - MELVILLE NORTH

SAMPLERS: (Signature) (Printed) JIM PERONTO

FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	PARAMETERS: FULL TCLP	REMARKS
MN-WP4-430	4/30/91			✓	Waste Pile Location #4	1	✓	
MN-WP5-430	4/30/91			✓	Waste Pile Location #5	1	✓	
MN-WP6-430	4/30/91			✓	Waste Pile Location #6	1	✓	
MN-WP7-430	4/30/91			✓	Waste Pile Location #7	1	✓	
~~MN-WP8-430~~								
MN-WP12-430	4/30/91			✓	Waste Pile Location #12	1	✓	

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
TRC-ECE	4/30/91 1730	FEDEX			
(Printed) JM PERONTO		(Printed)	(Printed)		(Printed)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature) Cathy Cares	Date / Time 5/1/91	Remarks	
(Printed)		(Printed)			

Original Plus One Accompanies Shipment (white and yellow); Copy to Coordinator Field Files (pink).